

(12) United States Patent

Cushion et al.

(54) TRAY AND BRACKET SYSTEM AND RELATED METHODS

(71) Applicant: Symmetry Medical Manufacturing

Inc., Warsaw, IN (US)

Inventors: Robert Cushion, Manchester, NH

(US); Jason Hawkes, Weare, NH (US)

Assignee: Symmetry Medical Manufacturing,

Inc., Warsaw, IN (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 14/539,352

(22)Filed: Nov. 12, 2014

(65)**Prior Publication Data**

> US 2015/0129524 A1 May 14, 2015

Related U.S. Application Data

(60) Provisional application No. 61/903,066, filed on Nov. 12, 2013.

(51)	Int. Cl.	
	A47F 7/00	(2006.01)
	A61L 2/00	(2006.01)
	A61L 2/26	(2006.01)
	A61B 50/34	(2016.01)

A61B 50/20

A61B 50/33 (2016.01)

(52) U.S. Cl.

CPC A61L 2/00 (2013.01); A61B 50/20 (2016.02); A61B 50/33 (2016.02); A61B 50/34 (2016.02); A61L 2/26 (2013.01); A61L 2202/182 (2013.01); Y10T 29/49899 (2015.01)

(2016.01)

US 9,636,429 B2 (10) Patent No.:

(45) Date of Patent:

May 2, 2017

Field of Classification Search

CPC ... A61L 2/26; A61B 19/0256; A61B 19/0271; A61B 50/20; A61B 50/33 USPC 206/363, 370, 439, 477–483 See application file for complete search history.

(56)References Cited

U.S. PATENT DOCUMENTS

3,890,459 A *	6/1975	Caveney	174/101		
3,954,184 A *	5/1976	Mendenhall	211/184		
4,135,868 A	1/1979	Schainholz			
4,262,799 A *	4/1981	Perrett	206/363		
4,798,292 A *	1/1989	Hauze	206/439		
5,173,273 A	12/1992	Brewer			
5,215,726 A *	6/1993	Kudla et al	422/297		
5,384,103 A	1/1995	Miller			
5,441,709 A *	8/1995	Berry, Jr	422/297		
(Continued)					

Primary Examiner - Leslie A Nicholson, III Assistant Examiner — Kimberley S Wright (74) Attorney, Agent, or Firm — Hayes Soloway PC

(57)ABSTRACT

A bracket and tray connection system includes a tray with a plurality of connector holes positioned therein, wherein the tray has an upper surface. A bracket has a base surface positioned proximate to an upper surface of the tray. At least one fastening tab is formed on the base surface of the bracket, wherein the fastening tab extends away from the base surface and through at least one of the connector holes within the tray. An interior corner pocket is formed by the fastening tab and located at least partially between the base surface and the fastening tab. An exterior corner of at least one of the connector holes is positioned with the interior corner pocket. A retainer structure is formed on the base surface of the bracket, wherein the retainer structure engages with the tray to retain the exterior corner positioned within the interior corner pocket.

20 Claims, 12 Drawing Sheets



